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## **Introduction**

Brand-building strategies such as brand equity have been shown to assist marketers in increasing loyalty levels through the creation of positive images towards the brand (Brady, Cronin, Fox & Roehm, 2008). Primarily applied in a commercial marketing setting, brand loyalty is also an important outcome for many social marketing programs where it is highly desirable to sustain the certain behaviour. Recycling programs, for example, encourage people to regularly separate their paper and food products for recycling, while healthy-eating programs focus on increasing the number of people who sustain healthy eating habits. A significant health issue that has attracted the interest of social marketers both internationally and in Australia is breastfeeding, which is a form of infant feeding for the first six months of life that achieves optimal growth and development in infants (World Health Organisation, 2001; Binns, 2003). Although the Australian state-based target was for 50% of infants to be exclusively breastfed at six months (Queensland Health, 2003), this target has not yet been met. This study therefore focuses on brand loyalty to breastfeeding in a social marketing context.

Brand equity is the perceptions consumers have of a brand that creates value for the customer and leads to brand loyalty (Brady *et al.*, 2008; Raggio & Leone, 2007) and is important when experience with the brand is lacking (Graham, Harker, Harker & Marshall 1994). While Aaker (1991) defined brand equity as being brand awareness, brand association, perceived quality and brand loyalty, contemporary thinking places brand loyalty as an outcome of perceptions and therefore not part of the brand equity construct (Brady *et al.*, 2008). Thus in this study brand equity comprises brand awareness, brand associations and perceived quality (Brady *et al.*, 2008). Given that a major goal for the social product of breastfeeding is to increase loyalty levels (i.e. duration rates), brand equity provides a useful theoretical framework to explain why current loyalty levels are not reaching the desired targets in Australia. Breastfeeding practice can be divided into three key outcomes: initiation, duration and exclusivity to six months of age (Hector, King & Webb, 2004). In Australia, less than half of Australian infants (48%) receive any breast milk at six months and only 18% were being exclusively breastfed (i.e. receiving only breast milk and no other fluids or solid food) (Australian Bureau of Statistics, 2003, 2006). In marketing terms, increasing the number of women who breastfeed their infants up to 6 months of age is about achieving loyalty to breastfeeding.

Social behaviours such as breastfeeding have product variants that can be considered a brand in the same way that the product category of soft drink has varieties of the product represented by brands. The principle of brand equity can be used to predict and manage uptake, defection/switching or loyalty to a brand of social behaviour. Accordingly, the purpose of this paper is to demonstrate the applicability of a brand equity approach to a social product. In doing this, we show the results of an online survey of 296 Gen Y Australians to determine levels of brand equity and loyalty for the social product of breastfeeding.

## Social Product of Breastfeeding

While there have been many successful social marketing programs that have developed clear brands, many organisations attempt social marketing without a brand. For some of these organisations the social brand is not ‘owned’ by any one organisation and as such the responsibility for developing a logo and branding strategy for the social behaviour is unclear. This is particularly the case with breastfeeding, where in Australia alone there are state governments, national governments, the Australian Breastfeeding Association (not-for-profit), and the Australian Lactation Consultant (a professional body) all promoting breastfeeding in various ways. None of these bodies have a logo or brand effort that represents the social behaviour brand. This non-integrated approach has contributed to confusion amongst consumers regarding breastfeeding options in terms of initiation, duration and exclusivity. A primary step in adopting a branded approach to breastfeeding is to identify the ‘brands’ of breastfeeding and the competitive products using commercial marketing product theory. The brands for the social product of breastfeeding are shown in Table 1.

**Table 1: A Comparison of Commercial and Social Products**

	Commercial product	Social product
<b>Product definition</b>	Softdrink	Behaviour of breastfeeding
<b>Brands</b>	Coca-cola, Pepsi, 7-Up, Mountain Dew	Initiation brand: any attempt at breastfeeding (initiation) Partial brand: any breastfeeding to 6 months (duration) Exclusive brand: exclusive breastfeeding to 6 months (exclusivity)
<b>Competitors</b>	Milk products, bottled water	Bottle-feeding, solid foods before 6 months, water

## Social Brand of ‘Any Breastfeeding for Six Months’

*Initiation*, *duration* and *exclusivity* can be described as three brands in the breastfeeding marketplace (Hector *et al.*, 2004). Each of these brands competes on a different pricing level, because in social marketing price refers to the costs incurred by the consumer. The *initiation* brand is the budget pricing approach where the costs (i.e. convenience and time) are minimal and available to all women; however, the benefits are marginal because the limited time spent using the brand lowers the value proposition. A mid-range strategy, where there are more costs (i.e. more time and effort) and higher benefits (to the mother, the infant and the community) than *initiation* is the *duration* brand. Finally, the *exclusivity* brand requires substantially higher costs (i.e. more commitment and less convenience) and therefore is less attractive to the general population of women with babies. This premium approach is endorsed as the gold standard of breastfeeding, yet statistics show that very few women adopt this brand with most not exclusively breastfeeding to six months.

In this study, the focal brand is *duration*. Initiation rates in Australia are now almost meeting targets (88% of infants ever breastfed) and thus health efforts do not concentrate on this brand (ABS, 2006; Queensland Health, 2003). Exclusive breastfeeding to six months, while recommended as ideal by various health organisations globally, is an unrealistic goal in the short term given that very few mothers in Australia adopt this brand. The most achievable goal and

the one that will make the most impact on health and economic well-being is the duration brand (i.e. any breastfeeding to six months).

A comparison of brand equity between commercial and the social product of breastfeeding is shown in Table 2.

**Table 2: A Comparison of Brand Equity for Commercial and Social Products**

Construct	Definitions	Commercial product (e.g. softdrink)	Social product: breastfeeding Brand: any BF for 6 months
<b>Brand awareness</b>	Recall and familiarity (Aaker, 1991)	Recall of the brand: "Name as many brands of soft drink as you can."	Awareness of any BF to six months
<b>Brand associations</b>	Brand personality (Aaker, 1991)	Excitement Fun Youth	Associations of any BF to six months
<b>Perceived quality</b>	Quality of the services/feature (Aaker, 1991)	Tastes good Convenient packaging safe	What are the features/benefits of exclusive BF to six months?
<b>Brand loyalty</b>	Attitudinal Behavioural (Yoo, Donthu & Lee 2001)	Intention to breastfeed until six months (ABA brand) Breastfeeding is my first choice	Intention to breastfeed exclusively for six months Continuing to breastfeed beyond X months

*Brand awareness* is the level of familiarity (i.e. salience and recall) a consumer has with the brand and does not imply beliefs that the brand is 'superior'. Consumers, therefore, can have high levels of awareness and knowledge of a brand but do not necessarily act on this knowledge (Brady *et al.*, 2008). In the case of breastfeeding, the majority of international research indicates that adolescents and young people generally have poor knowledge and little exposure to breastfeeding (Swanson, Power, Kaur, Carter & Shepherd, 2006; Tijang & Binns 2001).

*Brand association* is the belief held about the brand (Brady *et al.*, 2008; Aaker, 1991). When the brand image is congruent with the consumer's self-image, there is a closer alignment with the brand and this increases the preference for that brand (Graham *et al.*, 1994). For breastfeeding, the majority of international research indicates that adolescents and young people generally have negative or ambivalent attitudes towards breastfeeding (Giles, Connor, McClenahan, Mallett, Stewart-Knox & Wright, 2007; Kang, Song & Im, 2005; Swanson *et al.*, 2006). An example of this is the belief that breastfeeding reduces the ability to maintain a social life or working life (Swanson *et al.*, 2006).

*Perceived quality* is the perceived superiority of the product for the intended purpose compared to other brands (Aaker, 1991). The perceived quality of the brand of breastfeeding duration (i.e. any breastfeeding for six months) relates to the well-documented benefits of breastfeeding for the mother and baby.

*Brand loyalty* can be both attitudinal and behavioural (Russell-Bennett, McColl-Kennedy and Coote, 2007) and when used with brand equity is typically defined as intentions to act or preference for the brand (Pappu, Quester & Cooksey, 2007; Yoo *et al.*, 2001). Approximately 50-75% of women decide how they will feed their infants before or very early in their pregnancy (Blyth *et al.*, 2004; Scott, Aitken, Binns & Aroni, 1999). The earlier the decision is made to breastfeed, the greater the likelihood of initiation and longer duration. Mothers who intended to breastfeed for less than six months or were ambivalent about breastfeeding were more likely to prematurely discontinue breastfeeding their infants (Blyth *et al.*, 2004). The pre-determined breastfeeding goals are thought to be fulfilled regardless of any further interventions that may occur (Scott *et al.*, 1999; Donath & Amir, 2000). These three aspects of brand equity, as well as with brand loyalty, will be investigated in this research for breastfeeding.

## **Method**

An online survey collected 296 responses from a sample of Gen Y (aged 18-29 years) Australians who did not have children. This age cohort was selected as members of this group are likely to have their first child within the next five to 10 years and their intentions before birth have been shown to be a good predictor of actual behaviour (Blyth *et al.*, 2004). University students were initially contacted to participate in the survey and were asked to refer their friends to complete the survey (i.e. a snowball technique). The sample characteristics are as follows: 114 males and 182 females, 96% students, 72.5% are working part-time, 67% Australian Anglo ethnicity, 13.2% European and 14.5% Asian. None of the sample had children. 45% were exclusively breastfed as an infant and 22% were predominately breastfed. Reliability and validity tests were performed on all survey measures and items that did not meet the threshold criteria were removed. All questions used (see items shown in Appendix A) in the survey were sourced from previously validated questionnaires or developed from original source material (Libbus, 1992; Payne *et al.*, 2007; Swanson *et al.*, 2006; World Health Organisation, 2001).

*Brand awareness* items measured the accuracy of brand knowledge using facts about breastfeeding. For example, one item read “At what age should infants be introduced to other foods or fluids apart from breast milk or formula?” The purpose of these items was to identify how much knowledge the sample possessed about breastfeeding. There was only one right answer for each item and the overall score for awareness was calculated by giving each respondent a mark for the 16 questions. Low awareness was considered to be a score below 50% while high awareness was considered to be a score above 70% (see Dungy, McInnes, Tappin, Wallis & Oprescu, 2008 and Swanson *et al.*, 2006 for similar ratings).

*Brand association* was measured by asking respondents to rate a list of beliefs about breastfeeding on Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) (some items were reverse scored) with a summated score calculated. Example items include “I will feel comfortable breastfeeding or my partner breastfeeding my child in public”. A score of 5 indicates a positive brand association while a score of 1 indicates a negative brand association.

*Perceived quality* was measured by asking respondents to rate a list of breastfeeding quality attributes about on Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) with a summated score calculated. An example item is “Breastfeeding is painful for the mother” (some

items were reverse scored). A score of 5 indicates high perceived quality while a score of 1 indicates low perceived quality of breastfeeding.

*Brand loyalty* was measured by a single-item attitudinal loyalty measure of future intentions: intentions for one of the two post-initiation breastfeeding brands (partial or exclusive breastfeeding) and three competitor brands (bottle-feeding). The item was worded as follows: “If or when I (or my partner) have children my preference is to...” with the respondent selecting a preferred option.

## **Results**

The items were assessed for reliability and validity and those that were below the thresholds of 0.60 factor loading and 0.3 item-to-total correlations removed. The results show that there is low brand awareness (6.34/16), low brand association, low perceived quality and low loyalty towards the exclusive breastfeeding brand. An ANOVA test was performed to determine if there were any gender differences for the three brand equity dimensions and brand loyalty. The results show that there were gender differences in brand awareness ( $F\ 21.54, p<0.000$ ) and brand loyalty (Chi-square 18.6,  $p<0.000$ ), with females being more brand aware and more brand loyal to the exclusive breastfeeding brand (see Appendix B). Men were more loyal to the partial breastfeeding brand compared to women.

A regression analysis shows the effect of the brand equity dimensions on brand loyalty (adj.  $R^2 = .128$ ). Both brand awareness ( $B = .197, p<0.001$ ) and brand association were significant ( $B = .261, p<0.000$ ); however, the relationship between perceived quality and loyalty was not significant. This lack of significance may have been due to the summated score for perceived quality containing only two items.

## **Conclusion**

The aim of this research was to determine levels of brand equity and loyalty for the social product of breastfeeding. It has shown that amongst university students there is low brand equity and loyalty for the exclusive breastfeeding brand. This has significant implications for the Australian Breastfeeding Association, who are aiming to increase loyalty to exclusive breastfeeding. This paper contributes to the social marketing field by applying brand equity and brand loyalty concepts and filling the gap identified. It also demonstrates that brand equity and loyalty are useful diagnostic tools for social marketing programs that seek sustained behaviour.

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## Appendix A: Construct Items

### Brand Awareness

AW1 At what age should infants be introduced to other foods or fluids apart from breast milk or formula?

AW2 At what age is a child too old to breastfeed?

AW3 In Australia when do you think a woman should be advised to cease or avoid breastfeeding?

AW4 With regards to nutritional content, how close are infant/artificial formulas to breast milk (if 100% is equivalent to breast milk)?

AW5 A woman can produce more milk by:

AW6 From the five combinations of infant feeding below what are the Queensland recommendations for breastfeeding and the introduction of solids?

Are the following statements True or False, or do you not know?

AW7 Bottle feeding is just as healthy as breast feeding

AW8 Breast feeding helps to prevent allergies and infections in infants

AW9 Formula provides the same vitamins and nutrients as breast milk

AW10 Breastfeeding is good for the mother's health

AW11 Babies need to be breast fed for the first six months of life for greatest benefit

AW12 Breast feeding is inconvenient for the mother

AW 13 The earlier in life a woman makes the decision to breastfeed, the longer she will breastfeed for ?

AW 14 If a breastfeeding woman does not consume a well-balanced diet her breast milk will not be of adequate quality for infant growth

AW15 Women with smaller breasts are less likely to be able to feed successfully

AW 16 Women with larger breasts are less likely to be able to feed successfully

### Brand Association

Ass1 R I feel embarrassed or uncomfortable when I see a woman breastfeeding in public.

Ass2 Public policy and law should support women's rights to breastfeed in all restaurants, shopping centres and other public places Ass5R Using artificial/infant formula is preferable to breastfeeding because the father can be involved.

Ass3R Bottle feeding is a more socially accepted way to feed an infant.

Ass4R Artificial/infant formula is an easier feeding method than breastfeeding for the mother.

Ass6R Artificial/infant formula feeding is an easier feeding method than breastfeeding for everyone concerned (mother, family and friends)

Ass7R If I have children and go back to work it will be easier to bottle feed

Ass8 I will feel comfortable breastfeeding or my partner breastfeeding my child in public

Ass9R Peggy Kelly is expecting her first baby. She was advised to breastfeed but decides to bottle feed because she wants to go back to work when the baby is 3 months old and has heard that a breastfed baby will not take to the bottle. Do you agree with Peggy's decision?

### Perceived quality

PQ1R Breastfeeding limits a mother's social life

PQ2 Breastfeeding is the best way to feel close to a baby\*

PQ3R Breastfeeding limits a mother's ability to return to work

PQ4R Breastfeeding is painful for the mother\*

### Brand loyalty

My preference for feeding children is:

Exclusively breastfeed for at least 6 months

Predominantly breastfeed with occasional artificial feeding

Predominantly feed with infant/artificial formula and breast

Exclusively feed with artificial formula

\* indicates items removed

R indicates reverse-scored items

## Appendix B: Descriptive Analysis

	Scale	Mean	SD	Male Mean	Female Mean	ANOVA
<b>Brand awareness</b>	Max of 16	6.34	1.82	5.75	6.7	F 21.54, p<0.000
<b>Brand association</b>	1 – 5 Likert	2.97	0.61	3.04	2.95	n.s
<b>Perceived quality</b>	1 – 5 Likert	2.80	0.840	s.79	2.89	n.s
<b>Brand loyalty</b>	Proportion selecting exclusive breastfeeding	28.5% Exclusive 39.9% predominantly breastfed (duration) 1.7% predominantly bottle-fed 1.7% 27% have not thought about it	n/a	26%	73.8%	Chi-square 18.6, p<0.000